CLAIMS

What is claimed is:

1.   A method for making optical proximity corrections for a reticle
layout topology, comprising:

5   a)   manipulating edge segments of the reticle layout topology to
generate a corrected reticle layout accounting for optical distortions;

    b)   generating a plurality of individual figure of merit values associated
with the corrected reticle layout; and

    c)   generating a generalized figure of merit (GFOM) using the plurality
10   of individual figure of merit values.

2.   The method according to claim 1, further comprising manipulating
the edge segments of the corrected reticle layout in accordance with the GFOM
to arrive at a second corrected reticle layout.

3.   The method according to claim 2, further comprising generating a
15   second plurality of individual figure of merit values associated with the second
corrected reticle layout and generating a second GFOM using the second
plurality of individual figure of merit values.

4.   The method according to claim 3, wherein an equation defining the
second GFOM differs from an equation defining the GFOM of c).

20   5.   The method according to claim 1, wherein an equation defining the
GFOM is user definable.

6.   The method according to claim 1, wherein at least one of the
individual figure of merit values is user definable.

7.   The method according to claim 1, wherein the individual figure of merit values are selected from edge placement error, image contrast, depth of focus, image slope, fragmentation complexity and combinations thereof.

8.   The method according to claim 1, wherein the individual figure of merit values include at least image contrast.

9.   The method according to claim 1, wherein the individual figure of merit values include at least depth of focus.

10.   The method according to claim 1, wherein the individual figure of merit values include at least image slope.

11.   The method according to claim 1, wherein the individual figure of merit values include at least fragmentation complexity.

12.   The method according to claim 1, wherein the GFOM is a weighted sum of each individual figure of merit value.

13.   The method according to claim 1, wherein a) to c) are iteratively carried out using the corrected reticle layout and the GFOM from the previous iteration until the GFOM indicates an acceptable convergence on a reticle layout that accounts for optical distortion and at least one process factor.

14.   The method according to claim 1, wherein a) to c) are carried out for a portion of the reticle layout topology defined by a logical window.

15.   A program embodied in computer readable medium to make optical proximity corrections for a reticle layout topology, comprising:

a)   code that manipulates edge segments of the reticle layout topography to generate a corrected reticle layout accounting for optical distortions;

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b)   code that generates a plurality of individual figure of merit values associated with the corrected reticle layout; and

c)   code that generates a generalized figure of merit (GFOM) using the plurality of individual figure of merit values.

5   16.   The program embodied in computer readable medium according to claim 15, further comprising code that manipulates the edge segments of the corrected reticle layout in accordance with the GFOM to arrive at a second corrected reticle layout.

17.   The program embodied in computer readable medium according to
10   claim 16, further comprising code that generates a second plurality of individual figure of merit values associated with the second corrected reticle layout and generates a second GFOM using the second plurality of individual figure of merit values.

18.   The program embodied in computer readable medium according to
15   claim 17, wherein an equation defining the second GFOM differs from an equation defining the GFOM of c).

19.   The program embodied in computer readable medium according to claim 15, wherein the individual figure of merit values are selected from edge placement error, image contrast, depth of focus, image slope, fragmentation
20   complexity and combinations thereof.

20.   The program embodied in computer readable medium according to claim 15, wherein the GFOM is a weighted sum of each individual figure of merit value.

21.   The program embodied in computer readable medium according to
25   claim 15, wherein a) to c) are iteratively carried out using the corrected reticle layout and the GFOM from the previous iteration until the GFOM indicates an

acceptable convergence on a reticle layout that accounts for optical distortion and at least on process factor.

22. The program embodied in computer readable medium according to claim 15, wherein a) to c) are carried out for a portion of the reticle layout topology defined by a logical window.

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